

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1, 2 and 4-22 are currently being prosecuted. The Examiner is respectfully requested to reconsider the rejections in view of the remarks as set forth above.

Rejection Under 35 U.S.C. §103

Claims 1, 2, 4-11, and 15-22 stand rejected under 35 U.S.C. §103 as being unpatentable over del Castillo et al. (U.S. Patent 6,275,166), in view of Smith et al. (U.S. Patent 6,192,282). This rejection is respectfully traversed.

The Examiner points out that del Castillo chooses a radio frequency appliance control and monitoring system having a plurality of appliance management stations and a headend control station as shown in Fig. 2. The Examiner states that each AMS includes a RF transceiver that transmits return signals and receives command signals, a central processing unit connected to the transceiver, an integrated circuit for storage of a unique serial number and an output to an appliance. The headend control station includes a transceiver unit, a memory containing a database of serial numbers, and a control computer. The Examiner admits that this reference is silent on the appliance management stations

acting as an input/output device such that its CPU has a means for generating an event signal including one or more destination addresses and response to an input received from an appliance or user.

The Examiner states that the Smith reference shows a building automation system with the controller communicating with a variety of subsystems each of which has a means for providing an output to or an input from an appliance operationally connected to the subsystem. The Examiner feels that it would have been obvious to one of ordinary skill in the art to modify del Castillo's RF appliance control system in a manner taught by Smith because an AMS having a means for generating an event signal upon receiving an input as well as a means for functioning as a repeater allows for conditional control of appliances.

Applicants disagree that the claims are obvious over this combination of references. Present independent claims 1 and 15 specify a system and method related to controlling and monitoring devices having dual functionality, being able to generate an event signal and at the same time act as repeaters in the system.

Applicants respectfully submit that the combination of del Castillo and Smith is inappropriate. In short del Castillo comprises a device (URU) handling the reception/transmission/repeating of signals, and external modules (appliance devices)

handling the I/O functionality. Smith on the other hand, comprises a controller controlling the subsystems by serial or parallel data lines, wherein a user is controlling the system by using a user interface device communicating with the controller. Such system does not need repeaters since signals experience only insignificant transmission losses and amplification or re-transmission is not necessary. Such a system does not require a complicated communication protocol as in del Castillo, instead a very simple protocol is used, Smith therefore represents non-analogous art.

Smith discloses an automation system where a user can control a number of subsystems with I/O devices via a controller 13. The communication between the controller and the subsystems is based on serial or parallel data lines. One exception is the control of the audio/video subsystem, see column 8, lines 25-31. Audio/video devices have traditionally been controlled by wireless remote control via infrared (IR) links. The system disclosed by Smith may therefore, in addition to the wired data line, apply an IR link to control the audio/video subsystem.

The user controls the subsystems by issuing controls to the controller 13 using a number of different user interfaces, see column 8, lines 14-18. The user interface may use wired links and wireless IR or radio frequency (RF) links to the controller.

Smith only discloses the use of RF links in relation to the user interface, and not as a link between the controller and the subsystems. An input to e.g. a motion sensor in the security subsystem may trigger a signal which will be send to the controller via the wired link. Smith does therefore not disclose a RF automation system.

The system of Smith is based on wired communication links (e.g. column 5, lines 60-62) where the use of repeaters or relay units is not an issue. On the scale of a home automation system, signals in wires experience only insignificant transmission losses and amplification or re-transmission is not necessary. For this reason, the communication protocol of Smith does not provide the possibility of incorporating the repeater functionality.

Del Castillo discloses a system for managing a distributed array of appliances that includes a stationary headend control station (HCS) having a low power main transceiver and a distributed array of relay units (URU). The system in del Castillo has only one single controller, namely the headend control station controlling the system. The relay units only act in response to commands given by the headend control station. The relay units are not controllers and are not able to generate a signal on their own hand upon reception of input from an appliance.

In del Castillo, the signal reception/transmission/ repeating is handled by the URU (see e.g. column 8, line 19 - column 9, line 24) whereas the I/O device functionality can be found in appliance devices 24 which are interfaced to the local URU only (e.g. column 4, lines 52-54 and column 8, lines 32-37).

This is confirmed by column 7, lines 39-47 (Fig 4) and column 5, lines 2-6 as well as in column 8, lines 2-4, from where it is clear that all traffic to/from the AMS's are handled entirely by the URU's - the destination address in a command to the AMS is the URU's serial number.

As described in detail in column 8, lines 9-18, the URU applies a relay program 82 to receive command signals 60 and return signals 70 in the system, and an appliance program 84 for forwarding received control signals to the appliances. The programs 82 and 84 represent two different communication protocols.

Also, del Castillo fails to disclose that the relay program 82 can generate other signals than the acknowledgement return signal 70 (column 8, lines 4-6 and column 7, lines 48-55 + Fig.5), acknowledging only reception of the command signal 60 at the URU and not of the control signal C at the appliance. Even though an appliance may receive an input, the appliance program 84 does not provide means for notifying the URU of such input, and the relay

program 82 does not provide means for the URU to generate an 'event signal' to be transmitted from the AMS in response to such input.

Del Castillo provides a network based on RF links, which comprises relay units. Wired networks as used by Smith is a different technological field with well-established communication protocols, not suited for RF links. In improving the system of del Castillo, the person having ordinary skill in the art would not turn to a communication protocol/system based on wired links between controller and subsystems. Accordingly, Applicants submit that it would not be obvious to one of ordinary skill in the art to combine the teachings of the two references.

Both del Castillo and Smith teach the use of several distinct communication protocols in the system (see e.g. del Castillo column 8, lines 9-18 and Smith column 3, lines 26-37). Del Castillo teaches different protocols for controller-repeater links and repeater-appliance links, whereas Smith teaches that the controller apply different protocols towards different I/O devices.

The Examiner suggests that it is obvious for the ordinary skilled person to combine these two approaches into a third diverging approach according to the present invention. Here, there is no distinction between communicating to repeaters and I/O devices - as these are one - which is not suggested by del Castillo and

which is not an option in Smith, as Smith does not provide repeaters.

As outlined in the above it is not obvious to integrate an I/O device in to the system of Castillo, and to make the device communicate on its own with other devices. Thus creating a Mesh-network comprising many controllers, starting from a Star-network comprising one controller as in del Castillo. For this to work it would demand a special network topology distribution mechanism/protocol, which is not obvious since it would demand that all devices, comprise a complete and up to date topology map or at least a part of an up to date topology map of the system. This feature is not described in any of the two references del Castillo or Smith, thus the two references rather teach away from the present invention.

Moreover, there is nothing in del Castillo which points to Smith or vice versa. The only suggestion for combining these references is applicants' teachings. However, as set forth in MPEP 2143, "The teaching or suggestion to make a claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

MPEP 2143.01 goes on to further recite that obviousness can only be established by combining or modifying the teachings of the

prior art to produce the claimed inventions where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or the knowledge generally available to one of ordinary skill in the art. Here, such teaching, suggestion or motivation is not found.

The applicants therefore respectfully submit that Smith does not represent analogous art and that there is no motivation for the skilled person to turn to Smith starting from the teachings of del Castillo. Accordingly, Applicants submit that claims 1 and 15 are allowable over these two references.

Claims 2, 4-14 and 16-22 depend from these allowable independent claims and as such are also considered to be allowable. In addition, each of these claims recite other features which makes these claims additionally allowable.

Claims 12-14 stand rejected under 35 USC 103 as being unpatentable over del Castillo et al., U.S. Patent 6,275,166 in view of Smith et al., U.S. Patent 6,192,282, as applied to claim 1, and further in view of Brown, Jr. et al., U.S. Patent 5,544,036. This rejection is respectfully traversed.

The Examiner cites the Brown reference to show an energy management and home automation system with the central portion and a plurality of controllers, each controller providing electrical control signals to various electrical consuming devices. The



Examiner feels that it would have been obvious to modify del Castillo and Smith's system to reduce demand for electricity during critical events. Applicants disagree that these claims are obvious over these three references.

First, Applicants submit that it is even less obvious to combine each of these three references, especially without some motivation of the need to do so. Furthermore, Applicants submit that these claims are allowable based on their dependency from allowable claims 1 and 15.

#### Conclusion


In view of the above remarks, it is believed that the claims clearly distinguish over the patents relied on by the Examiner, either alone or in combination. In view of this, reconsideration of the rejections and allowance of all the claims are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse (Reg. No. 27,295) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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